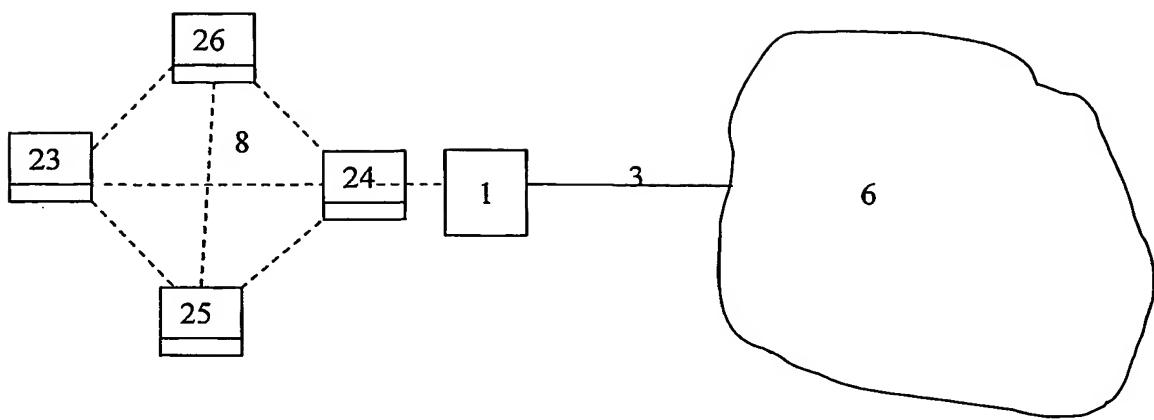


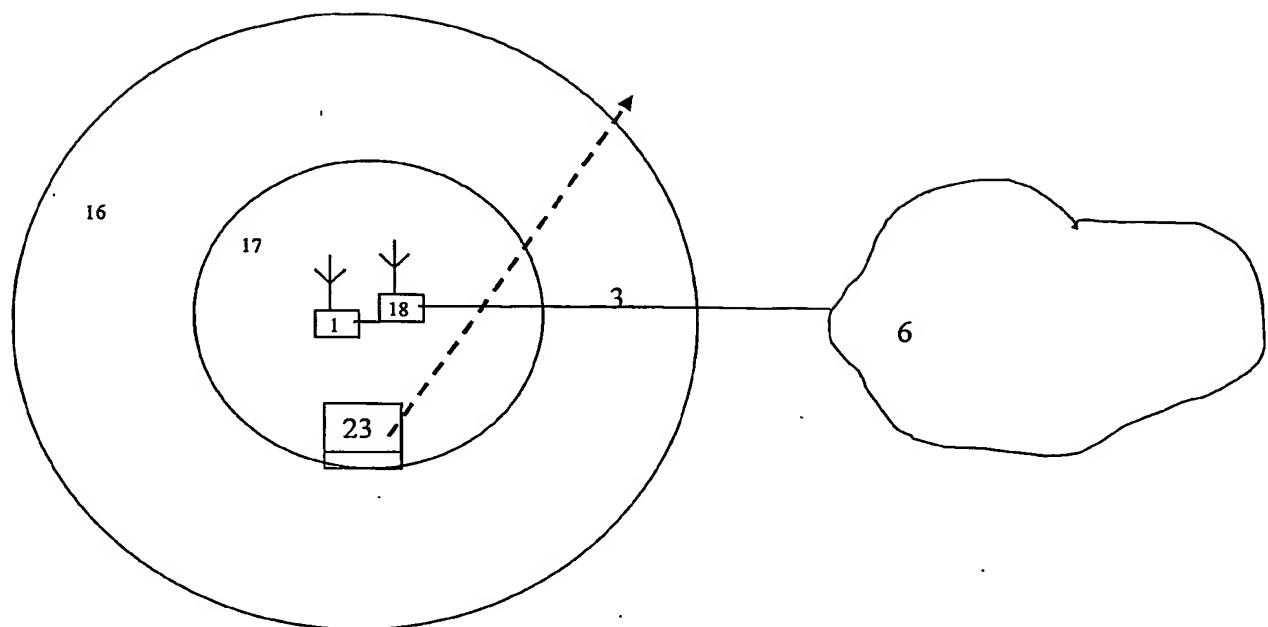
- 1: Base Station (BS) in a broadband mobile network
- 3: Feeder line to mobile core network
- 4x: Mobile terminals
- 6: Mobile core network
- 16: Coverage zone for the actual BS
- 21: Location server
- 22: Switches/routers

Figure 1 Communication in a traditional mobile network



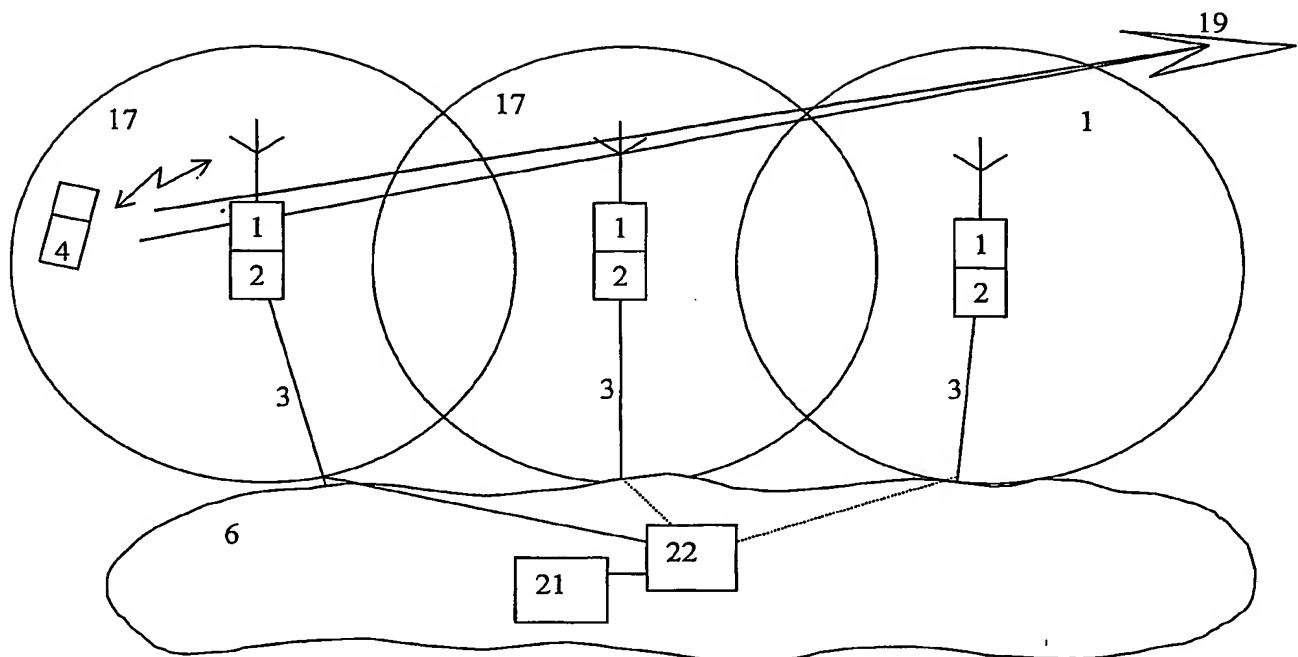
- 1: WLAN base station with access to Core network
- 3: Subscriber's access line to core network (Internet)
- 6: Core network
- 8: Wireless connections
- 23: PC with WLAN (Laptop)
- 24: Printer
- 25: PDA (Personal Digital Assistant)
- 26: Music storage device

Figure 2 Ad-Hoc/P2P network with connection to a legacy network over a broadband access line



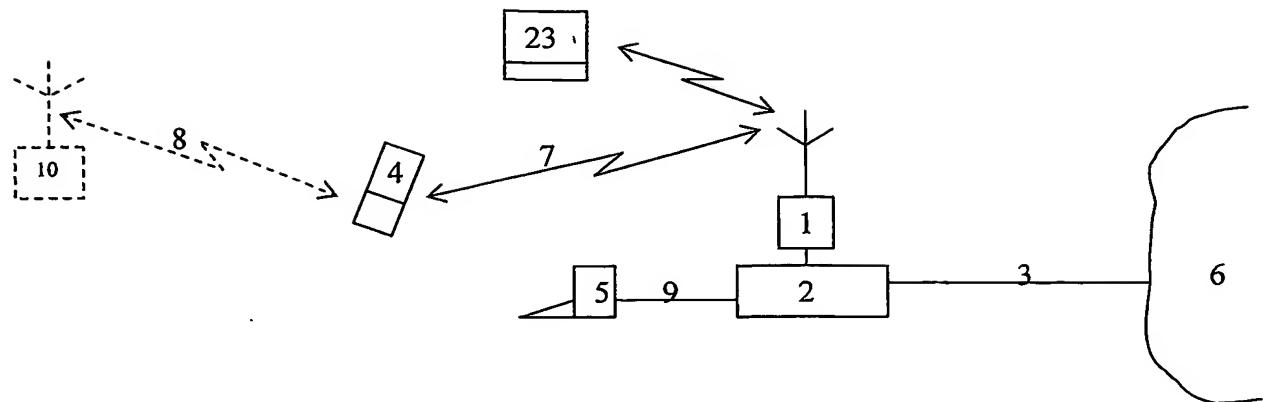
- 1: Wireless LAN base station
- 3: Feeder line to mobile core network
- 6: Mobile core network
- 16: Coverage zone of GSM base station
- 17: Coverage zone of WLAN base station
- 18: GSM base station
- 23: PC with WLAN (Laptop)

Figure 3 GSM base station with WLAN



- 1: Micro base station – any type of wireless LAN
- 2: Home network unit with local wireless network 1 and broadband access line 3 to the core network 6.
- 3: Subscribers' broadband access lines to core network
- 4: Mobile terminal
- 6: Core network
- 17: Coverage zone of MBS
- 19: Moving direction of (4)
- 21: Location server
- 22: Switches/routers

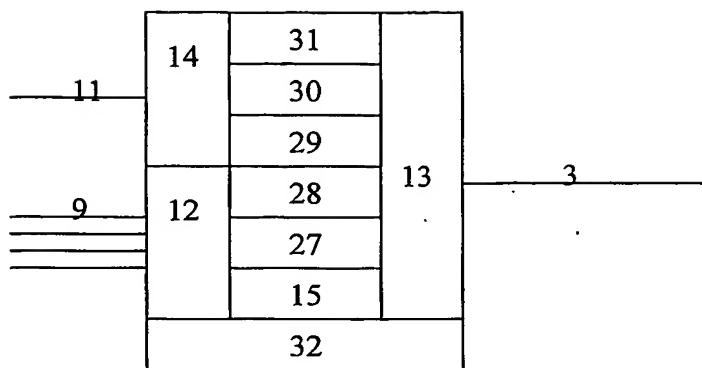
Figure 4 Scenario description of the innovation



- 1: Local Micro base station (MBS)
- 2: Home network unit with local network and broadband access line to the core network
- 3: Subscriber's broadband access line (ADSL, VDSL, optical fibre, ..)
- 4: Stationary or visiting user's mobile terminal
- 5: Stationary terminal
- 6: Core network (Internet, any broadband network, PSTN/ISDN, ...)
- 7: Radio signal from local MBS
- 8: Radio signal from vicinal MBS
- 9: Wired connection in a local network (home network, LAN,..)
- 10: Vicinal MBS
- 23: PC with WLAN (Laptop)

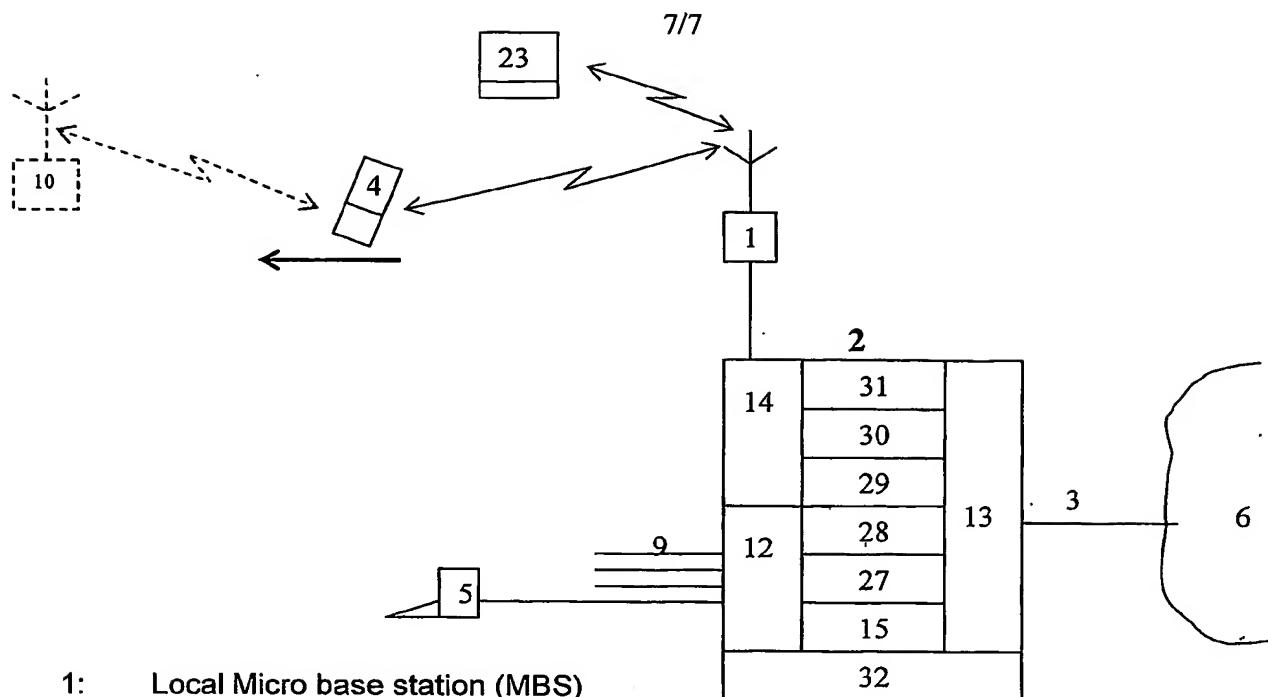
Figure 5 Technical description of the invention

2



- 2: The home network unit
- 3: Public access line to a broadband telecommunication network
- 9: Lines to stationary communication devices.
- 11: Connection to Micro base station (MBS)
- 12: Wired home network (IEEE1394, LAN, etc)
- 13: Interface module (xDSL modem, optical fibre, etc) to public network
- 14: Interface module to MBS
- 15: Switching/routing functions
- 27: Resource (bandwidth) management
- 28: Connection/routing and mobility protocols
- 29: Roaming protocols
- 30: Security protocols
- 31: Quality of service (priority) mechanisms
- 32: Charging and management

Figure 6      Functionalities of home network unit



- 1: Local Micro base station (MBS)
- 2: The home network unit
- 3: Public access line (ADSL, VDSL, optical fibre, etc) to a broadband telecommunication network
- 4: Stationary or visiting user's mobile terminal
- 5: Stationary terminal
- 6: Core network (Internet, any broadband network, PSTN/ISDN, ...)
- 9: Lines to stationary communication devices
- 10: Vicinal MBS
- 12: Wired home network (IEEE1394, LAN, etc.)
- 13: Interface module (xDSL modem, optical fibre, etc.) to public network
- 14: Interface module to MBS
- 15: Switching/routing function
- 23: PC with WLAN (Laptop)
- 27: Resource (bandwidth) management
- 28: Connection/routing and mobility protocols
- 29: Roaming protocols
- 30: Security protocols
- 31: Quality of service (priority) mechanisms
- 32: Charging and management

Figure 7 Complete functional description